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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

ARISTA NETWORKS, INC.,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

Case No. 5:16-CV-00923-BLF

**ARISTA NETWORKS, INC.'S
MOTION FOR PARTIAL SUMMARY
JUDGMENT OF CISCO SYSTEMS,
INC.'S MONOPOLY POWER IN THE
RELEVANT MARKETS**

Date: April 19, 2018
Time 9:00 A.M.
Judge: Hon. Beth Labson Freeman
Dept: Courtroom 3

DEMAND FOR JURY TRIAL

REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED

NOTICE OF MOTION AND STATEMENT OF RELIEF SOUGHT

PLEASE TAKE NOTICE that on April 19, 2018, at 9:00 a.m., or at such other time as the Court may direct, before the Honorable Beth Labson Freeman, at the United States District Court in the Northern District of California, Plaintiff Arista Networks, Inc. (“Arista”) will, and hereby does, move the Court pursuant to Rule 56 for Partial Summary Judgment that: (1) the U.S. market for Ethernet Switches, the worldwide market for Ethernet Switches, the U.S. market for High-Speed Ethernet Switches, and the worldwide market for High-Speed Ethernet Switches are each relevant antitrust markets and that (2) Cisco has monopoly power in each of these markets. This Motion is based on this Notice of Motion and Motion, the Memorandum of Points and Authorities below, the Declaration of William Nelson (“Nelson Decl.”), and such other and further papers, evidence and argument as may be submitted to the Court in connection with the hearing on this motion.

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I. INTRODUCTION

Two specific elements of Arista's Sherman Act monopolization claims against Cisco—establishing the relevant antitrust markets and establishing that Cisco has monopoly power in those relevant markets—are highly technical economic questions that multiple courts have found to require expert economic testimony. Arista establishes each of these elements through the detailed analyses and findings of Professor Fiona Scott Morton, a former Deputy Assistant Attorney General for Economic Analysis at the Department of Justice Antitrust Division and current Professor of Economics at the Yale University School of Management. Professor Scott Morton conducted a detailed independent economic analysis of the market data and other facts of this case and concluded: (i) that the Ethernet switch market and the high-speed Ethernet switch market each satisfy the hypothetical monopolist test (an accepted method for establishing relevant markets in antitrust cases) both in the United States and world-wide; and (ii) that Cisco's long-standing dominant market share (exceeding 65% over much of the relevant time period and approaching as high as 80%) and other evidence establish that Cisco has monopoly power in each of these relevant markets. Although Cisco offers its own rebuttal expert report, Cisco's expert Dr. Carlton does not offer an alternative definition of the relevant market(s), nor does he assert that Cisco lacks monopoly power in the relevant markets.

Because Cisco offers no substantive expert analysis disputing either Arista's defined relevant markets or Cisco's market power in them, there is not and cannot be any genuine issue of dispute regarding these "highly technical economic question[s]." *Morgan, Strand, Wheeler & Biggs v. Radiology, Ltd.*, 924 F.2d 1484, 1490 (9th Cir. 1991). This Court should grant summary judgment that: (1) the U.S. market for Ethernet Switches, the worldwide market for Ethernet Switches, the U.S. market for High-Speed Ethernet Switches, and the worldwide market for High-Speed Ethernet Switches are each relevant antitrust markets and that (2) Cisco has monopoly power in each of these markets.

II. LEGAL STANDARD

"Summary judgment is appropriate if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." *Sicor Ltd. v. Cetus*

1 *Corp.*, 51 F.3d 848, 853 (9th Cir. 1995).¹ Courts have held that the specific elements of Arista’s claims
 2 at issue in this motion—determining the relevant markets and monopoly power—are highly technical
 3 economic questions likely to require expert testimony.

4 The Ninth Circuit has described the determination of the relevant market(s) in antitrust cases as
 5 a “highly technical economic question.” *Morgan, Strand, Wheeler & Biggs v. Radiology, Ltd.*, 924 F.2d
 6 1484, 1490 (9th Cir. 1991). Citing that same decision, courts of this district have found that establishing
 7 the relevant market(s) “likely requires expert testimony.” *Hynix Semiconductor Inc. v. Rambus Inc.*, No.
 8 CV-00-20905, 2008 U.S. Dist. LEXIS 123822 at *42 n. 13 (N.D. Cal. Jan. 5, 2008). The Eleventh Circuit
 9 has similarly consistently held that the “[c]onstruction of the relevant market and a showing of monopoly
 10 power ***must be based on expert testimony.***” *Bailey v. Allgas, Inc.*, 284 F.3d 1237, 1246 (11th Cir. 2002)
 11 (citing *Colsa Corp. v. Martin Marietta Servs.*, 133 F.3d 853, 855 n.4 (11th Cir. 1998) (quoting *American*
 12 *Key Corp. v. Cole Nat’l Corp.*, 762 F.2d 1569, 1579 (11th Cir.1985) (“We have stated that ‘construction
 13 of a relevant economic market or a showing of monopoly power in that market ***cannot . . . be based***
 14 ***upon lay opinion testimony.***” (ellipses in original))).

15 When a defendant fails to genuinely dispute these elements, summary judgment is appropriate.
 16 This Court has recently granted partial summary judgment on behalf of an antitrust plaintiff defining the
 17 relevant market where the defendant failed to offer sufficient expert analysis disputing the plaintiff’s
 18 market definition. *United Food & Commer. Workers Local 1776 v. Teikoku Pharma USA*, No. 14-md-
 19 02521-WHO, 2017 U.S. Dist. LEXIS 182940, at *72 (N.D. Cal. Nov. 3, 2017). Courts of this district
 20 have similarly granted partial summary judgment on other elements of plaintiffs’ antitrust claims where
 21 defendants failed to establish a genuine disputed issue of material fact. *See, e.g., Santa Cruz Med. Clinic*
 22 *v. Dominican Santa Cruz Hosp.*, No. C93 20613 RMW, 1994 U.S. Dist. LEXIS 21740, at *36 (N.D.
 23 Cal. Oct. 26, 1994) (granting partial summary judgment on plaintiff’s standing); *In re NCAA Student-*
 24 *Athlete Name & Likeness Litig.*, 37 F. Supp. 3d 1126, 1151-52 (N.D. Cal. 2014) (granting partial
 25 summary judgment on one of defendant’s proffered justifications for conduct at issue).

26 As discussed below, partial summary judgment is similarly appropriate here given Cisco’s lack
 27 of expert analyses disputing the relevant markets or Cisco’s monopoly power in them.

28 ¹ Emphasis supplied and citations and quotations omitted throughout unless otherwise noted.

III. BACKGROUND

Arista's Amended Complaint pleads that Cisco violated Section 2 of the Sherman Act through unlawful monopolization and attempted monopolization of the relevant markets, as well as related violations of the California Unfair Competition Law. D.I. 162, ¶¶ 112-133. Following extensive fact discovery, on December 18, 2017, Arista served the Expert Report of Fiona M. Scott Morton, Ph.D. Ex. 14. Professor Scott Morton is a Professor of Economics at the Yale University School of Management and a former Deputy Assistant Attorney General for Economic Analysis at the Department of Justice Antitrust Division, and received a Ph.D. in economics from MIT. *Id.* at ¶¶ 1-7, Appendix A.

Professor Scott Morton conducted a detailed expert evaluation of the markets at issue, including evaluation of data produced by the parties in this case, third party market data, and other facts and information produced in this case. Based on that independent expert analysis, Professor Scott Morton determined (among other conclusions), that:

- the U.S. market for Ethernet Switches, the worldwide market for Ethernet Switches, the U.S. market for High-Speed Ethernet Switches, and the worldwide market for High-Speed Ethernet Switches are each relevant antitrust markets (*id.* at ¶¶ 71-94);
- Cisco has longstanding monopoly power in each of these relevant markets, including that Cisco has long held substantial market power and dominant market shares in each of these markets (*id.* at ¶¶ 95-103);
- there are high barriers to entry and expansion in the relevant markets (*id.* at ¶¶ 104-106); and
- Cisco's change in policy from an early, open policy regarding competitor use of Cisco-like Command Line Interfaces (CLI) to a late, closed policy asserting exclusive proprietary rights to a Cisco-like CLI was an anticompetitive strategy that harmed consumers and competition and harmed Arista through the loss of approximately \$159.7 million in profits in 2015 and 2016 (*id.* at ¶¶ 12-20, 111-257).

On February 2, 2018, Cisco submitted an expert report from its expert Dr. Dennis Carlton purporting to respond to Professor Scott Morton's report. Ex. 1 (Expert Report of Dennis Carlton). Though Dr. Carlton disputes some of Professor Scott Morton's conclusions in his report, his report

notably does not provide any opinion or analysis proposing any alternative definition for the relevant antitrust markets, and does not dispute that the product or geographic markets described by Professor Scott Morton meet the hypothetical monopolist test and are the relevant antitrust markets. Nor does Dr. Carlton dispute that Cisco has monopoly power in each of those relevant markets. *See id.* Dr. Carlton confirmed at his deposition that his report provided a full and complete statement of his opinions, and the bases for them, and further confirmed that “ [REDACTED] ” Ex. 2 (02/16/2018 Carlton Dep. Tr.) at 21:11-24.

Given Cisco’s decision not to offer any expert testimony disputing these specific and highly technical economic questions involved in Arista’s claims, Arista respectfully moves for summary judgment that these elements are met by and for the reasons described in Professor Scott Morton’s report and further explained below.

IV. STATEMENT OF UNDISPUTED FACTS

Based on the above, Arista respectfully submits the following undisputed facts in support of Arista’s Motion under Rule 56(a). In the event that some portion of Arista’s Motion is not granted, Arista also submits these as facts not genuinely in dispute that should be ordered established under Rule 56(g).

1. A hypothetical monopolist of Ethernet switches in the United States would have the ability to impose at least a small but significant and nontransitory increase in price (“SSNIP”) on at least one product in the U.S. Ethernet switch market. Ex. 14 (Scott Morton Rpt.), ¶¶ 82-85, 92 ; *see also id.* at ¶¶ 71-81 and 90-94.
2. A hypothetical monopolist of Ethernet switches worldwide would have the ability to impose at least a SSNIP on at least one product in the global Ethernet switch market. *Id.*, ¶¶ 82-85, 93 ; *see also id.* at ¶¶ 71-81 and 90-94.
3. A hypothetical monopolist of high-speed Ethernet switches (switches with speeds of 10GB or greater) in the United States would have the ability to impose at least a SSNIP on at least one product in the U.S. high-speed Ethernet switch market. *Id.*, ¶¶ 86-89, 92 ; *see also id.* at ¶¶ 71-81 and 90-94.
4. A hypothetical monopolist of high-speed Ethernet switches (switches with speeds of 10GB or greater) worldwide would have the ability to impose at least a SSNIP on at least one product in the

- 1 global high-speed Ethernet switch market. *Id.*, ¶¶ 86-89, 93 ; *see also id.* at ¶¶ 71-81 and 90-94.
- 2 5. Cisco offers no expert opinion in response to Professor Scott Morton’s opinion that the markets for
- 3 Ethernet switches and for high-speed Ethernet switches are each relevant antitrust product markets.
- 4 6. Cisco offers no expert opinion that the relevant product markets should be defined other than as
- 5 defined by Professor Scott Morton and Arista.
- 6 7. The market for Ethernet switches is a relevant antitrust product market. *Id.*, ¶¶ 82-85; *see also id.* at
- 7 ¶¶ 71-81.
- 8 8. The market for high-speed Ethernet switches (switches with speeds of 10GB or greater) is a relevant
- 9 antitrust product market. *Id.*, ¶¶ 86-89; *see also id.* at ¶¶ 71-81.
- 10 9. Cisco offers no expert opinion in response to Professor Scott Morton’s opinion that the relevant
- 11 geographic markets are the United States and the world.
- 12 10. Cisco offers no expert opinion that the relevant geographic markets should be defined other than as
- 13 defined by Professor Scott Morton and Arista.
- 14 11. The relevant geographic markets are the United States and the world. *Id.* ¶¶ 71-81, 90-94.
- 15 12. Since 2004, Cisco’s share of Ethernet switch revenue in the United States and the world remained
- 16 above 70% and 60%, respectively, sometimes approaching 80% and 70%, respectively, through at
- 17 least 2015. *Id.*, ¶¶ 42, 98.
- 18 13. Since 2015, Cisco’s share of Ethernet switch revenue in the United States and the world continues
- 19 to be above 60% and 50%, respectively. *Id.*, ¶¶ 42, 98.
- 20 14. Cisco maintained a revenue market share of roughly 70% or more in the market for high-speed
- 21 Ethernet switches in the United States and at least 65% worldwide from 2004 until 2013. *Id.*, ¶ 99.
- 22 15. Cisco maintained a revenue market share of 50% or more in the market for high-speed Ethernet
- 23 switches in the United States and the world from 2013 through at least 2016. *Id.*, ¶ 99.
- 24 16. Cisco’s high market shares in the U.S. and global markets for Ethernet switches and the durability
- 25 of these market shares are consistent with Cisco possessing substantial market power. *Id.*, ¶ 98, 100.
- 26 17. Cisco’s high market shares in the U.S. and global markets for high-speed Ethernet switches and the
- 27 durability of these market shares are consistent with Cisco possessing substantial market power. *Id.*,
- 28 ¶ 99-100.

- 1 18. Cisco has the largest installed base of Ethernet switches, including comprising approximately 80%
- 2 of the installed base of Ethernet switches as of 2015. *Id.* ¶¶ 101-103.
- 3 19. Cisco offers no expert testimony disputing that Cisco has monopoly power in the markets for
- 4 Ethernet switches sold in the United States and worldwide.
- 5 20. Cisco offers no expert testimony disputing that Cisco has monopoly power in the markets for high-
- 6 speed Ethernet switches sold in the United States and worldwide.
- 7 21. Cisco has monopoly power in the markets for Ethernet switches sold in the United States and
- 8 worldwide. *Id.* ¶¶ 95-110.
- 9 22. Cisco has monopoly power in the markets for high-speed Ethernet switches sold in the United States
- 10 and worldwide. *Id.* ¶¶ 95-110.
- 11 23. Cisco's large installed base of Ethernet switches and the large investment of money and time
- 12 required to develop the relevant technology and reputation to viably compete with Cisco are barriers
- 13 to entry and expansion in the U.S. and global Ethernet switch markets. *Id.*, ¶¶ 103-106.
- 14 24. Cisco's large installed base of high-speed Ethernet switches and the large investment of money and
- 15 time required to develop the relevant technology and reputation to viably compete with Cisco are
- 16 barriers to entry and expansion in the U.S. and global high-speed Ethernet switch markets. *Id.*, ¶¶
- 17 103-106.
- 18 25. Cisco offers no expert testimony disputing that Cisco's large installed base or the large investment
- 19 of money and time required to develop the relevant technology and reputation to compete on an
- 20 equal footing with Cisco are barriers to entry and expansion in the U.S. or global Ethernet switch or
- 21 high-speed Ethernet switch markets.
- 22 26. Cisco commands a price premium for its Ethernet switches, and no Cisco competitor has amassed
- 23 more than a 10.1% share in the U.S. and global Ethernet switch markets. *Id.*, ¶¶ 98, 107.

24 V. ARGUMENT

25 A. There Is No Genuine Issue of Material Fact That Arista Has Established Four 26 Relevant Antitrust Markets.

27 This Court has articulated the economic test to use to define a relevant product market:

28 To determine whether products are reasonable substitutes for each other [for purposes of determining a relevant antitrust product market], you must consider whether a small but significant and non-transitory increase in the price of one product would result in enough

customers switching from that product to another product such that the price increase would not be profitable. In other words, will customers accept the price increase or will so many switch to alternative products that the price increase will be withdrawn?

United Food, 2017 U.S. Dist. LEXIS 182940 at *79-81. This test for acceptance of a SSNIP is known as the Hypothetical Monopolist Test (“HMT”). The HMT is used by the U.S. Department of Justice and the Federal Trade Commission to determine relevant markets. Ex. 15 (ARISTA923_10000240, U.S. Department of Justice and Federal Trade Commission, “Horizontal Merger Guidelines,” Aug. 19, 2010) at 7-8. The HMT has also been cited by this and other courts as an appropriate standard for determining the relevant market. *See, e.g., United Food*, 2017 U.S. Dist. LEXIS 182940 at *79-81; *In re S.E. Milk Antitrust Litig.*, 739 F.3d 262, 277-78, 281-82 (6th Cir. 2014) (“the hypothetical monopolist is ‘a useful framework for organizing the factors the courts have applied in geographic market definition.’” (quoting 2 Earl W. Kinter *et al.*, Federal Antitrust Law § 10.15 (2013))); *FTC v. Sysco Corp.*, 113 F.Supp. 3d 1, 33-34 (D.D.C. Jun. 23, 2015) (“One of the primary methods used by economists to determine a product market is called the ‘hypothetical monopolist test.’”). This Court has also noted that the HMT addresses the cross elasticity of demand between products in the proposed relevant market and those products excluded from the market. *See United Food*, 2017 U.S. Dist. LEXIS 182940 at *79-81 & n. 26 (explaining that the hypothetical monopolist test incorporates an inquiry into cross elasticity of demand).

Professor Scott Morton applied and considered precisely this Hypothetical Monopolist Test in her analysis of the relevant markets in this case. Ex. 14 (Scott Morton Rpt.), ¶¶ 71-94. Based on pricing data produced by Cisco and Arista and other market information, Professor Scott Morton determined that a hypothetical monopolist could impose at least a SSNIP on at least one product in each of the relevant product markets (Ethernet switches and high-speed Ethernet switches having a speed of at least 10GB) and in each of the relevant geographic markets (the United States and the world). *Id.*, ¶¶ 82-94. Professor Scott Morton explained that the Hypothetical Monopolist Test can allow multiple overlapping relevant markets and submarkets to be defined where helpful to illuminate the evaluation of competitive effects. *Id.*, ¶¶ 79-81; Ex. 15 (ARISTA923_10000240, U.S. Department of Justice and Federal Trade Commission, “Horizontal Merger Guidelines,” Aug. 19, 2010) at 9-10; *see also Morgan, Strand, Wheeler & Biggs v. Radiology, Ltd.*, 924 F.2d 1484, 1490 (9th Cir. 1991) (“A submarket exists if it is sufficiently insulated from the larger market so that supply and demand are inelastic with the larger

market.”).

Dr. Carlton’s report contains zero analysis or opinions disputing or rebutting Professor Scott Morton’s application of the HMT. *See* Ex. 1 (Carlton Rpt.). Indeed, Cisco has not presented any expert analysis or opinion disputing the definitions of the relevant markets offered by Professor Scott Morton, let alone any expert analysis or opinion establishing any alternative definition of the relevant market(s) for purposes of this case. *See generally id.* Dr. Carlton even applies Professor Scott Morton’s relevant market definitions in his report. *Id.*, ¶ 41 [REDACTED]

[REDACTED]; *see also id.*, ¶¶ 42-43, 95, 100 (similarly applying Professor Scott Morton’s relevant markets).

Where, as here, a plaintiff meets its burden of establishing the relevant markets but the defendant fails to present any of the “highly technical economic” expert analysis required to rebut those definitions or to support alternative asserted definitions (*Morgan*, 924 F.2d at 1490), summary judgment adopting the plaintiff’s relevant market(s) should be granted. *United Food*, 2017 U.S. Dist. LEXIS 182940 at *73-96 (granting plaintiff’s motion for summary judgment and holding “as a matter of law that the market is limited to 5% lidocaine patches, Lidoderm and its generic equivalents.”) In fact, in this Court’s decision in *United Food*, the defendant at least offered expert testimony proposing an alternative relevant market definition. *Id.* at *73-75. However, the Court *still* found no issue of material fact and granted the plaintiff’s motion for partial summary judgment because the defendant and its expert failed to offer the highly technical economic analysis required to support an alternative relevant market definition—namely, proof of elasticity of demand in the asserted alternative market (the precise issue that can be established through application of the HMT). *Id.* at *77-96. In this case, the absence of any genuine issue of fact is even more pronounced because Cisco’s expert does not even dispute Professor Scott Morton’s relevant markets—let alone apply the HMT or otherwise offer the expert economic analysis necessary to establish elasticity of demand in any asserted alternative definition of the relevant market. Arista’s motion for partial summary judgment regarding the relevant antitrust markets should be granted.

B. There Is No Genuine Issue Of Material Fact That Cisco Has Monopoly Power In Each Of The Relevant Markets.

Monopolization claims under Section 2 of the Sherman Act “require a showing of monopoly

power, commonly referred to as market power.”² *Image Technical Servs. v. Eastman Kodak Co.*, 125 F.3d 1195, 1202 (9th Cir. 1997). Monopoly power (or market power) is “the power to control prices or exclude competition” and it “can be proven by either direct or circumstantial evidence.” *Id.* “To demonstrate market power by circumstantial evidence, a plaintiff must: (1) define the relevant market, (2) show that the defendant owns a dominant share of that market, and (3) show that there are significant barriers to entry or expansion and show that existing competitors lack the capacity to increase their output in the short run.” *Id.* Analysis of monopoly power and these factors involve complex economic questions that require expert testimony. *See, e.g., Bailey*, 284 F.3d at 1246 (“Construction of the relevant market and ***a showing of monopoly power must be based on expert testimony***,”); *see also Colsa*, 133 F.3d at 855 n.4 (“We have stated that ‘construction of a relevant economic market or ***a showing of monopoly power in that market cannot . . . be based upon lay opinion testimony***.’”).

As discussed in the section above, Professor Scott Morton has defined the relevant markets and those definitions are undisputed. Professor Scott Morton found through her analysis that the remaining two factors show that Cisco has monopoly power in each of those relevant markets, as further explained below. Because Cisco fails to offer any expert testimony disputing that Cisco has monopoly power in each of the relevant markets, or otherwise genuinely disputing any of the above monopoly power factors, Arista’s motion for partial summary judgment that Cisco has monopoly power in the relevant markets should be granted.

1. Cisco Does Not Dispute That It Has Consistently Held a Dominant Market Share In Each Of The Relevant Markets And In The Installed Base Of Ethernet Switches.

A market share of 65% establishes a *prima facie* case of monopoly power and is sufficient to show that the defendant owns a dominant share of the market. *Image Technical Servs. v. Eastman Kodak Co.*, 125 F.3d 1195, 1206 (9th Cir. 1997) (also noting that “a dominant share of the market often carries with it the power to control output across the market, and thereby control prices.”). The Federal Trade

² Or, for Arista’s attempted monopolization claim, that Cisco has a dangerous probability of succeeding in gaining monopoly power in the relevant markets. *See Spectrum Sports v. McQuillan*, 506 U.S. 447, 456 (1993) (requiring a “dangerous probability of achieving monopoly power”); *see also* D.I. 162 at ¶ 123.

Commission advises that monopoly power can be found even with 50% or greater market share. *See* Ex. 16 (ARISTA923_10000246, “Monopolization Defined,” Federal Trade Commission, available at <https://www.ftc.gov/tips-advice/competitionguidance/guide-antitrust-laws/single-firm-conduct/monopolization-defined>). There is no genuine dispute that Cisco’s market share exceeds these levels in each relevant market.

Professor Scott Morton analyzed Cisco’s market share based on data regarding Cisco’s share of the revenue in each of the relevant markets, concluding that Cisco does own a dominant share of the market and wields substantial market power as a result. Ex. 14 (Scott Morton Rpt.), ¶¶ 42, 95-100.³ Cisco has held the largest market share of any competitor in the Ethernet switch market without fail since at least 1995. *Id.*, ¶ 98. Cisco’s share of the U.S. Ethernet switch market exceeded 65% from 2008-2016 (exceeding 70% from 2008-2015) and Arista is the sole competitor to reach significant market share:

Figure 4. US switch revenue shares, 2008Q1–2017Q2

Vendor	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017Q2
Cisco	76.8%	74.7%	76.2%	73.4%	74.5%	73.3%	73.1%	71.1%	68.7%	64.6%
Arista	0.0%	0.0%	0.0%	0.0%	1.6%	2.8%	4.5%	5.7%	7.6%	10.0%
Juniper	0.5%	1.5%	2.4%	2.9%	3.1%	3.8%	4.6%	5.1%	5.1%	6.6%
HPE	2.9%	4.1%	5.5%	4.4%	3.8%	3.6%	3.5%	3.8%	3.5%	4.7%
ODM-Direct	0.0%	0.0%	0.0%	0.0%	1.1%	1.6%	2.3%	3.9%	4.9%	4.7%
Dell	0.0%	0.0%	0.0%	1.1%	2.4%	2.4%	2.2%	1.9%	1.9%	1.9%
Extreme	1.4%	1.2%	0.9%	1.0%	1.0%	1.1%	1.5%	1.3%	1.2%	1.5%
Netgear	1.1%	1.3%	1.1%	1.3%	1.4%	1.5%	1.3%	1.2%	1.3%	1.3%
Brocade	0.0%	4.6%	3.5%	3.3%	2.2%	1.8%	2.2%	2.2%	1.8%	1.3%
Others	17.3%	12.7%	10.5%	12.5%	8.9%	8.1%	5.0%	3.8%	4.0%	3.4%

Id., ¶¶ 42, 98. Cisco’s share of even the larger worldwide market for Ethernet switches also repeatedly exceeded 65% during this same time period and remained above 50% from 2008 through 2017. *Id.*, ¶¶ 42, 98. Similarly, in the high-speed Ethernet switch market, Cisco’s market share remained above 70% in the U.S. and above 65% in the global market from 2008 until 2013. *Id.*, ¶ 99. Cisco’s share of

³ Both Professor Scott Morton and Cisco’s expert Dr. Carlton agree that Cisco’s revenue share of the Ethernet switch and high-speed Ethernet switch markets are the appropriate metric for evaluating and discussing Cisco’s market share.; Ex. 1 (Carlton Rpt.), ¶ 41

1 the high-speed market fell below these levels for the first time in 2013 alongside the rise of Arista's own
 2 market share. *Id.* Professor Scott Morton determined that these persistent high market shares in all four
 3 relevant markets, particularly in view of the much smaller market shares held by any of Cisco's
 4 competitors, are a strong indication of Cisco's substantial market power. *Id.*, ¶ 100.

5 Professor Scott Morton found that other factors also supported her conclusion that Cisco has
 6 market power in, and controls a dominant share of, the relevant markets. She considered Cisco's portion
 7 of the existing installed base of Ethernet switches, finding that Cisco holds the largest share of the
 8 installed base of Ethernet switches. *Id.*, ¶ 101. [REDACTED]

9 [REDACTED] *Id.* Cisco's large share of the existing installed base results from (and further confirms)
 10 Cisco's longstanding dominant marketshare. As Professor Scott Morton explained, Cisco's control of a
 11 dominant share of the installed base also further enhances Cisco's market power in addition to Cisco's
 12 dominant market share by creating a barrier to entry and expansion for other competitors. *Id.*, ¶¶ 101-
 13 106. She also found that Cisco has maintained a substantial price premium and high margins since at
 14 least 2008, further confirming Cisco's market power in the relevant markets. *Id.*, ¶¶ 95-96, 107.

15 Again, Cisco's expert Dr. Carlton offers no opinion that Cisco does not own a dominant share
 16 of the market or that Cisco otherwise lacks market power in the relevant markets. *See* Ex. 1 (Carlton
 17 Rpt.), ¶¶ 26-45. Dr. Carlton does opine that Cisco's market share has declined over time, particularly
 18 since 2013 when Arista's innovative products began to gain market share. *Id.*, ¶¶ 39-43; *see also id.*,
 19 ¶ 93 (" [REDACTED]" (agreeing with and citing Scott Morton Rpt., ¶
 20 246 ([REDACTED])). However, Dr. Carlton
 21 does not dispute the industry market share data that Professor Scott Morton analyzed or the market share
 22 percentages that she calculates. *Id.*, ¶¶ 39-43. The fact that Cisco's market share may be decreasing
 23 recently does not negate that Cisco's market share has exceeded 65% in each of the relevant markets
 24 during the time period of Cisco's open early, closed late conduct at issue in this case.

25 Tellingly, Dr. Carlton does not opine that the decreases in market share that he observes show
 26 that Cisco does not own a dominant share of any of the relevant markets or that Cisco otherwise lacks
 27 monopoly power in any of the relevant markets. *See id.*, ¶¶ 26-45. Analysis of market data to determine
 28 whether Cisco holds a dominant share of the market is precisely the type of "highly technical economic"

question that requires expert testimony. *See Morgan*, 924 F.2d at 1490 (9th Cir. 1991); *Bailey*, 284 F.3d at 1246 (“... *a showing of monopoly power must be based on expert testimony*”). Cisco’s decision not to offer such testimony shows that Professor Scott Morton’s findings regarding this factor of monopoly power are not genuinely disputed.

2. Cisco Does Not Dispute That Barriers To Entry Exist In The Relevant Markets Or That Those Barriers Also Prevent Existing Competitors From Significantly Expanding.

The Ninth Circuit has defined entry barriers as “additional long-run costs that were not incurred by incumbent firms but must be incurred by new entrants or factors in the market that deter entry while permitting incumbent firms to earn monopoly returns.” *See W. Parcel Express v. United Parcel Serv. of Am., Inc.*, 190 F.3d 974, 975 (9th Cir. 1999). As examples of “main sources of entry barriers,” the Ninth Circuit identified both “entrenched buyer preference” and “capital market evaluations imposing higher capital costs on new entrants.” *Id.* Professor Scott Morton determined that barriers to competitors’ entry and expansion exist in the relevant markets in this case, including specifically these two types of barriers, and those opinions again are un rebutted by Cisco’s expert, Dr. Carlton.

Professor Scott Morton’s analysis of the market data and facts of this case determined that there are several barriers to entry and expansion that buttress Cisco’s persistent dominance and market power. The existing installed base of Cisco switches—making up approximately 80% of the installed base as of 2015—imposes a barrier to entry and expansion because customers have developed an entrenched preference for products that will be compatible with their existing installed base and familiar to their engineers. Ex. 14 (Scott Morton Rpt.), ¶¶ 101-104; *see also id.*, ¶¶ 124-127 (further discussing the importance to customers of Cisco-like CLI compatibility). Indeed, Cisco’s own 30(b)(6) designee and Senior Vice President of Data Center Sales, Frank Palumbo, confirmed that having a Cisco-like CLI to address this entrenched customer preference was “[redacted]” to competing in the relevant markets:

“[redacted]
[redacted]
[redacted]”. Ex. 17

(6/7/2016 Palumbo Dep. Tr.) at 22:14-20.

1 Professor Scott Morton also determined that bringing products to the relevant markets that can
 2 viably compete with Cisco at Cisco's current scale requires a capital investment of hundreds of millions
 3 of dollars. Ex. 14 (Scott Morton Rpt.), ¶ 104. This higher capital cost barrier for new entrants is
 4 illustrated by the significant costs to Cisco of creating and then re-acquiring its own "spin-in" company
 5 Insieme in an attempt to more effectively compete with Arista in the high-speed Ethernet switch market.
 6 *Id.*, ¶¶ 60, 104, 121; *see also* Ex. 18 (ARISTA923_1000224, Julie Bort, "Cisco Launches its Secret
 7 Startup Insieme, Then Buys It for \$863 Million," Business Insider, Nov. 6, 2013) (explaining that Cisco
 8 spent \$863 million to reacquire its start up Insieme). Professor Scott Morton also identified that
 9 switching costs associated with incorporating a new competitor's product into a customer's network
 10 environment with existing switches from another vendor form an additional barrier to entry and
 11 expansion. Ex. 14 (Scott Morton Rpt.), ¶ 104.

12 As in *Kodak*, "[a]lthough some new entry [is] possible, the record reflects substantial evidence
 13 of entry barriers sufficient to prevent [Cisco's] monopoly share from self-correcting." *See Image*
 14 *Technical Servs. v. Eastman Kodak Co.*, 125 F.3d 1195, 1208 (9th Cir. 1997). Professor Scott Morton
 15 noted that these barriers to entry, coupled with Cisco's anticompetitive open early, closed late conduct,
 16 did in fact result in no significant new entrants into the relevant markets since 2014. Ex. 14 (Scott Morton
 17 Rpt.), ¶ 251.

18 At least Cisco's installed base, the entrenched "[REDACTED]" customer preference for Cisco-like
 19 compatibility, and vendor switching costs all also operate as barriers to competitor expansion, because
 20 each also serves to inhibit competitors from expanding output to meaningfully challenge Cisco's
 21 dominant share even after entry into the market has occurred. *See Image Tech.*, 125 F.3d at 1208
 22 (discussing how entry barriers also prevented "increased output by established suppliers"). As Professor
 23 Scott Morton explained, no competitor other than Arista has amassed a significant share in any of the
 24 relevant markets. Ex. 14 (Scott Morton Rpt.), ¶¶ 41-42, 104-105. This has led to colloquial descriptions
 25 of the network switching industry as "Cisco and the seven dwarfs"—referring to Cisco's dominant
 26 market share in contrast to the shares of Cisco's multiple competitors that are generally an order of
 27 magnitude smaller than Cisco's share. *Id.* As Professor Scott Morton explained, the failure of any
 28 competitor to gain market share of more than 10.1% is particularly strong evidence confirming the

1 existence of these barriers to competitor expansion. This is confirmed by the hard data: despite Cisco's
 2 persistent price premium that it has commanded for its products, no competitor has been able to expand
 3 its short term output to capture any significant share beyond 10.1% (and most competitors have failed
 4 to reach double-digit market share). *Id.*, ¶¶ 41-42, 104-105. Specifically, as Professor Scott Morton
 5 found from her analysis of Cisco and industry pricing data, Cisco has commanded a substantial per-port
 6 price premium for its Ethernet switches. *Id.*, ¶ 107 (describing and illustrating in the figures that Cisco
 7 charged a persistent price premium in the U.S. and worldwide markets for 10GB switches from 2005
 8 through 2011; for 40GB switches from their introduction in 2012 through 2015; and for 100GB switches
 9 from their introduction in 2015 through 2017). The fact that no competitor other than Arista, which
 10 Cisco concedes has been an innovator, (Ex. 1 (Carlton Rpt.), ¶ 93, citing Ex. 14 (Scott Morton Rpt.),
 11 ¶ 246 ([REDACTED])) has been able to
 12 significantly expand despite these premiums is strong confirmation of the significant barriers to entry
 13 and expansion supporting Cisco's monopolies.

14 Again, the analyses of information about the relevant markets to determine the existence and
 15 extent of barriers to entry and to expansion are precisely the types of "highly technical economic"
 16 questions that require expert testimony. *See Morgan*, 924 F.2d at 1490 (9th Cir. 1991); *Bailey*, 284 F.3d
 17 at 1246 ("... *a showing of monopoly power must be based on expert testimony*"). And, again, Cisco's
 18 expert Dr. Carlton offers no opinion disputing the most important barriers to entry and expansion
 19 described by Professor Scott Morton and summarized above. *See* Ex. 1 (Carlton Rpt.), ¶¶ 31-38. Instead,
 20 Dr. Carlton opines only that the availability of contract manufacturing vendors and access to open source
 21 software have reduced some of the costs of entering the network switching market (*id.*, ¶¶ 31-34), that
 22 switching costs are not substantial (*id.*, ¶ 35), and that the \$ [REDACTED] that Cisco paid to initially fund
 23 Insieme more accurately represents the cost of entry into the relevant markets at scale than the \$863
 24 million that Cisco paid to reacquire Insieme (*id.*, ¶¶ 36-38). And whatever limited disagreements Dr.
 25 Carlton does identify with respect to Dr. Scott Morton's identification of the barriers to entry, none of
 26 them were sufficient to cause him to conclude that Cisco does not have monopoly power in the relevant
 27 markets.

28 None of Dr. Carlton's opinions genuinely dispute Professor Scott Morton's analysis, or Cisco's

own 30(b)(6) testimony that Cisco's dominant share of the existing Ethernet switch installed base creates a "[REDACTED]" entrenched buyer preference for Cisco that serves as a barrier to entry and expansion. This alone shows that the barriers to entry and expansion factor of monopoly power is not genuinely disputed. Similarly, Dr. Carlton's opinion that the capital cost for a new entrant to develop and bring to market a product that can compete with Cisco at its current scale is "only" \$[REDACTED] rather than \$863 million does not genuinely dispute Professor Scott Morton's determination that capital costs on the order of even \$[REDACTED] constitute a barrier to entry and expansion.

In addition, Dr. Carlton admitted at his deposition that there is yet another barrier to entry and expansion in the relevant markets—vendor reputation. Ex. 2 (02/16/2018 Carlton Dep. Tr.) at 133:8-134:22 ([REDACTED]). This is yet another independent basis to find that the market power factor regarding barriers to entry and expansion is not genuinely disputed. *See, e.g., Image Technical Servs.*, 125 F.3d at 1208 (finding entry barriers existed where, *inter alia*, Kodak had "brand name power").

Because Cisco does not genuinely dispute any of the factors in the analysis of monopoly power, Arista's motion for partial summary judgment should be granted as to monopoly power as well.

VI. CONCLUSION

For the following reasons, Arista respectfully requests that the Court enter partial summary judgment in favor of Arista that: (1) the U.S. market for Ethernet Switches, the worldwide market for Ethernet Switches, the U.S. market for High-Speed Ethernet Switches, and the worldwide market for High-Speed Ethernet Switches are each relevant antitrust markets and (2) Cisco has monopoly power in each of these markets.

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Respectfully submitted,

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